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Original Research Article

Barriers to uptake of bilateral tubal ligation family planning method among grand-multiparous women in the Copperbelt province, Zambia

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ABSTRACT

Background: Use of Bilateral Tubal Ligation (BTL) family planning method has been met with resistance by some women owing to its clash with certain personal values in their lives. In some cases these barriers have led to unintended pregnancies, which in turn cause complications, especially in grand-multiparous women (women with many children). This qualitative study explored the barriers towards the uptake of BTL among grand-multiparous women.
Methods: The study used an exploratory qualitative methodology to explore the barriers to uptake of BTL. Semi structured interviews were utilised to collect data. Twenty-five semi-structured interviews were held with grand multiparous women who were attending clinics for family planning services. All interviews were tape-recorded and transcribed verbatim. A thematic approach underpinned by some aspects of the silences framework was utilised for data analysis.
Results: The study revealed that barriers to the uptake of BTL included desire to maintain productivity, pressure from spouses, stigmatization of family planning, safety fears and loss of self-esteem.
Conclusions: There is need to engage all stakeholders in communities to make sure that fears and doubts on the use of BTL are allayed. Furthermore there is need to roll out more health promotion and raise awareness on the importance of family planning.

Keywords: Community, Maternal, Multiparity, Patriarchy, Stigma

INTRODUCTION

Globally, one of the major causes of maternal mortality is atonic postpartum haemorrhage, atonic postpartum haemorrhage accounts for 80% of all maternal deaths and is the number one cause of maternal mortality.[1] Uterine atone is very common in grand multiparous women due to overdistension of the uterus by multifetal pregnancy, hydramnios, macroscopic fetus and precipitated labour.[2] Grand multiparity refers to women who have had five or more viable babies.[3] These women are also likely to have placenta praevia, genital sepsis, utero-vaginal prolapse, intra-uterine fetal death, maternal and perinatal mortality.[4] Poor use of family planning leads to unintended pregnancies, which in turn cause complications of pregnancy, especially in grand multiparous women. Unintended pregnancies occur primarily due to unmet need for contraception as well as reliance on less effective user-dependent, short-acting methods. 38% of 210 million

pregnancies that occur annually worldwide are unplanned.[5] Unintended pregnancies pause a major public health challenge for women of reproductive age in developing countries such as Zambia. The maternal mortality rate of Zambia is 213/100 000 live births.[6] This might be attributed to grand multiparity which is thought to be a risk factor for antepartum, intrapartum and neonatal complications that impact on the health of a mother and/or baby, such as gestational diabetes, pre-eclampsia, premature birth, placental issues and many more.

Family planning is one of the 12 pillars of reproductive health, which benefits both maternal and child health while improving the socio-economic status of a country.[7] Many women of childbearing age like to delay their pregnancy or even stop bearing children but still rely on traditional and less effective methods of contraception or no method at all.[8] Unmet contraceptive need is high in Sub-Saharan Africa, more than 30% in some countries. In Zambia, the overall unmet need for contraceptives among married women stands at 22%, and the contraceptive prevalence rate is at 47%.[8] Permanent methods of family planning are methods that prevent pregnancy permanently, and these include vasectomy in men and tubal ligation in women. These methods, also known as sterilisation, should be viewed as permanent, although in a few cases reversal of the method is requested.[9] There are two long-term irreversible methods of family planning methods used by women. These are hysterectomy (total removal of the uterus) and BTL a surgical procedure that involves blocking the fallopian tubes to prevent the ovum (egg) from being fertilised.[10] An estimated 600 million women worldwide have undergone female sterilisation.[11] For grand-multiparous women, permanent family planning methods help to prevent complications, for example, uterine atone, which can occur, resulting in postpartum haemorrhage.[4] Male and female sterilisation is the choice of contraception for many couples once they have decided that their family is complete.

Couples requesting sterilisation need counselling support to ensure that they have considered all eventualities, including possible changes in family circumstances. Although the consent of a partner is not necessary, joint counselling of both partners is desirable. According to, during the procedure, the uterine tubes are occluded using division and ligation, application of clips or rings, diathermy, or laser treatment.[4] The operation is performed under local or general anaesthesia; it can be performed via a laparotomy, mini laparotomy, or laparoscopy. It can also be performed vaginally using a hysteroscopy. The procedure usually requires a day in the hospital. Women are advised to continue using contraception for 4 weeks following the procedure or for 3 months in the case of hysteroscopic sterilisation, after which successful tubal blockage is confirmed by hysterosalpingography.[4] The couple should be advised to seek medical help urgently if they suspect pregnancy following sterilisation because of the high risk of ectopic pregnancy if the procedure is unsuccessful. The couple is also made aware that there are no alterations to hormone production following sterilisation.

According to, BTL is a safe, cost-effective and widely used method of sterilisation in the world especially in developed countries such as the United States of America and Europe.[2] States that approximately 222 million women of reproductive age in the world can be protected from unintended pregnancies through BTL, however, its uptake is low.[12] In Africa, BTL uptake is low because of deep-rooted socio-cultural and religious hindrances, poverty, inadequate counselling, limited facilities and shortage of trained personnel.[8] Zambia is not an exception, as evidenced by the low uptake of BTL. For instance, only 17(0.01%) out of 102 702 women had BTL in Ndola District of Zambia in 2018 and 4 (0.004%) out of 102 450 women who came for family planning services in 2019 from January to December.[13] This shows that women of childbearing age are not using long-term irreversible family planning methods.

Despite health education given on methods of family planning during the antenatal period and post- delivery, bilateral tubal ligation continues to have a low uptake.[2] Instead, grand-multiparous women of childbearing age who have attained the desired number of children still opt for other short-term family planning methods. There is no data on why there is a low uptake of long-term irreversible methods of family planning in Zambia. It is against this background that this qualitative study explored the barriers towards the uptake of BTL among grand-multiparous women in Ndola district, Zambia.

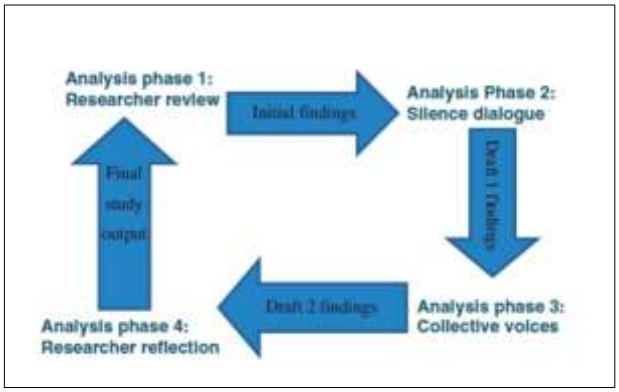

Figure 1: The four phases of the Silences framework (source: Green 2011).

METHODS

Study design

The study used an exploratory qualitative methodology to explore the barriers to uptake of BTL in family planning among grand-parous women. The intention was to better understand the issue as opposed to conjuring a final and conclusive solution to the matter in question.[14] The exploratory qualitative methodology has a potential to

identify possible areas for further investigations and can provide an overview of the issue in question from a new perspective leading to key information for future interventions to address the problem.[15]

Study setting

The study was carried out in the Copperbelt province of Zambia. Clinics for family planning located in the Copperbelt were used as recruiting centres for research participants. Data was collected between November 2021 and December 2022.

Selection criteria

The inclusion criteria involved women who were attending family planning clinics to access services. The women had more than five children to qualify as grand-multiparous women (women with who had given birth to five or more children regardless of livebirth or still birth. All the women resided in the Copperbelt province of Zambia.

Data collection and recruitment

The data was collected using semi-structured interviews to explore the barriers to the utilisation of BTL among grand multiparous women. The interview guide was developed and informed by the literature from previous primary and secondary research studies on utilisation of long-term irreversible family planning methods.[16] Prior to conducting the interviews, a pilot study involving five research participants was carried out to test the feasibility of the interview protocol. The five interviews were carried out virtually via Zoom and WhatsApp. The utilisation of Zoom and WhatsApp online platforms as methods of enabling data collection was in line with the social distancing enforced by the central government of Zambia to curtail the spread of COVID-19 pandemic. Following the completion of the pilot interviews, the five research participants were invited to comment on the feasibility of the interview protocol with regards to understanding and responding to the questions. All the five interviewees did not suggest any changes to the original interview schedule as they felt that it was suitable for the purpose.

For the study data collection, twenty-five individual semi-structured interviews were held with grand multiparous women who were attending clinics for family planning services. The researchers sent letters and information sheets to family planning clinics inviting grand multiparous women who had come for family planning to take part in the research study. Only those who agreed to take part in the research study and fulfilled the study criteria had their names and telephone contacts forwarded to the researchers to organise interview dates and time. Grand multiparous women who had come to seek family planning but were unwilling to take up BTL were eligible to participate in the study. BTL was included to differentiate it from the other irreversible family planning methods like hysterectomy provided at the family planning clinics. All the participants were living in the Copperbelt province.

The interviews were held through Zoom and WhatsApp online platforms. As stated earlier, the use of an online platform was to ensure compliance to the social distance protocol put in place by the Government to prevent the spread of COVID -19 as the interviews took place during the COVID 19 pandemic period. Prior to the interviews research participants were given an opportunity to read and understand the information sheet before asking questions for clarifications. Furthermore, all the twenty-five research participants signed a consent form, which granted them the right to withdraw from the study at any time without giving reasons. They were also assured that the withdrawal from the study will not impact on their present provision of any service or right in health care. The interviews lasted for forty-five minutes and were conducted in English or local languages depending on the preference of the research participant.

Data analysis

All interviews were tape-recorded and transcribed verbatim. NVivo was used to organise the data and make analysis easy. For the verification of accuracy, all transcriptions were read back to the research participants to facilitate confirmation. A thematic approach underpinned by some aspects of the silences framework was utilised for data analysis.[17] The four phases of the data analysis included:

Phase 1: Following transcription, the data from the interviews was analysed by the researchers, and recurrent themes were identified as the preliminary findings from the study.

Phase 2: The preliminary findings from phase 1 were reviewed by the research participants in the presence of the researchers, who noted down any comments and reflections. These were used to enhance further critique, confirming, or refuting the findings from phase 1. A discussion of the findings was formulated and moved to phase 3 for further analysis.

Phase 3: Further analysis of the findings from phase 2 was undertaken by the social networks of the research participants. The participants in this phase were drawn from the Copperbelt communities and had not taken part in the focus group discussions or interviews. These participants mirrored the actual participants in all respect. The aim was to consolidate the findings from phase 2 with a critical indirectly associative eye.

Phase 4: Finally, the researchers reflected on the findings from phase 3, revisiting, reviewing, and developing emerging themes, which formed the final output of this study. Figure 1 below shows the four phases of the Silences Framework.

RESULTS

The study revealed that barriers to the uptake of BTL included desire to maintain productivity, pressure from spouses, stigmatization of family planning, safety fears and loss of self-esteem. Table 1 shows the study respondents demographic characteristics.

To capture the findings of the study in the exact words spoken by the research participants table 2 shows the themes describing the findings and captions from the research participants.

Table 1: Study respondents demographic characteristics.

Respondents' age status	35-40 years old	41 – 49 years old
	17	**8**
Respondents' marital status	Married	Never married before
	17	2
	Divorced	Widowed
	2	4
Respondents' education status	University education	College education
	2	6
	Secondary education	Primary education
	9	8
Respondents' knowledge' status on BTL	High	Moderate
	2	4
	Slight	Not knowledgeable
	7	12
Respondents' F/P uptake status	BTL	Injectable
	1	12
	Oral contraceptives	Condoms
	8	0
	Implants	On no method
	2	2
Respondents' interview language	Ichibemba	English
	8	17

Desire to maintain productivity

The research participants revealed that they wanted to preserve their fertility for prospects of maintaining socio-economic successes for themselves and their families. Tying or cutting fallopian tubes was referred to as self-imposed suicide because chances of bearing other children to replace the dead in case death occurred were not possible. They also maintained that culturally, children serve as a rich resource for hard work, especially when it involved physical work (tilling fields, herding cattle, etc.). They went on to categorise the importance of having particularly more female children for wealth gain in families through dowry and having educated boys to become breadwinners responsible for looking after parents and siblings.

Pressure from spouses

The research participants reported cultural demands in marriages as overruling on women's reproductive health; particularly anything to do with family planning as the desire to bear children was said to be dependent on husbands and no one else. Taking decisions independently was considered as a taboo and could result in being divorced.

Stigmatization of family planning

The research participants reported that women who cut or tie their reproductive system bring bad luck to themselves and could be considered as prostitutes or witches. This was based on the notion that women carry live eggs which could be fertilized and form babies, but if this is disturbed by BTL, it is synonymous to killing, resulting in high stigmatization of BTL. They believed that society never respected women who had lost fertility and discovered to have been using family planning methods because it was a taboo to block a reproductive system with artificial medicines.

Safety fears

The research participants reported fear of being anaesthetised to death because some circulating rumours in their communities were that sometimes people who are

taken to operating theatres and placed under anaesthesia do not come back alive. Others expressed worry over how they would deal with the wound from the incision because of fear of wound gapping and bleeding. Furthermore, their experience was grappled with some serious rumours that organs could be stolen and sold, which therefore made them feel uncomfortable to ever consider BTL saying their reproductive systems would be sold for rituals.

Loss of self-esteem

The research participants reported low interest in taking or being advised to do BTL. They believed in upholding their principles of womanhood and self-respect with their fallopian tubes intact. They shunned undergoing BTL as it impacted on their dignity in society.

Table 2: Themes describing the findings and captions of research participants.

Themes of findings	Captions from research participants
Desire to maintain productivity	……. It is not a good idea for a woman to kill unborn children through cutting her reproductive system when she does not even know what will happen the next day. These unborn children could be a source of livelihood when old and in need of material and financial help. ……. I cannot have my childbearing tubes cut or tied because my parents never ever did such a thing. My mother bore the ten of us and was highly respected in our village. She was always called to teach other women in society, so for a woman to maintain her womanhood, she needs her womb intact
Pressure from Spouses	……. It is not an easy thing to take certain decisions like going for BTL. What if in case the man wants more children, what do you do? Uuuuuum….it may result in divorce. A man is a difficult human being, he can decide to marry another woman and leave you the wife. ……Men are like chameleons, in the turn of events, they will always blame women and cause chaos to come out clean; what I mean is in case they decide to re-marry, the excuse will be, this woman can no longer bear me children.
Stigmatisation of Family planning	…….My fear of BTL is to be blamed for causing a problem on myself in future where society will look at me with an evil eye because of failing to bear my husband children should there be need again. ……I am personally very skeptical to take such decisions in my life because I don't want to be called names by society, I have seen how women without children in their marriages are called; 'Ingumba' (Bemba term describing someone who can't bear children)
Safety Fears	……...I will not hide you madam; I will tell you the truth; I cannot start taking myself for operation at the hospital when I am not sick. Why should I buy my own death with such procedures? No, no, no, no, no, no. ……. Personally, I fear what I hear about people who have died in theatre, so being sent to sleep is scary. I am okay like this with my organs intact, it is better to wait for Gods time and not tempering with what the owner has created.
Loss of self-esteem	……Cutting or tying fallopian tubes is like being undressed forever. It destroys the prestige of being an important woman in society, and if you lose this respect, it can never be regained. ……Women need to maintain a sense of dignity, a sense of mental fulfilment when their reproductive systems are fully functioning, so it is not necessary to disrupt childbearing.

DISCUSSION

In Africa, acceptability of female sterilisation like BTL is hindered by a number of factors. This study has shown that some of these factors include desire to maintain productivity, pressure from sppuses, stigmatisation, safety fears and loss of self-esteem. In many sub-Sahara African communities' importance and respect is accorded to a woman who gives birth to many children and maintains their ability to do so.[18] This notion has become part of the social construction that has driven many grand multiparous women to desist the uptake of long-term irreversible family planning methods such as BTL. The research participants revealed that they wanted to preserve their fertility for prospects of maintaining socio-economic successes for themselves and their families. Tying or cutting fallopian tubes was referred to as self-imposed suicide because chances of bearing other children to replace the dead in case death occurred were not possible. This was also reinforced by the notion widely held by the communities depicting having many children as a measure of potential wealth in future.[13] It is therefore important that the central government, through the ministry of health, should roll out comprehensive health promotion to raise awareness on the impact of poor family planning on the

health and wellbeing of families. The awareness needs to go beyond targeting women to also include men as the views and beliefs in having many children is also driven by values deemed central to the communities in question. The importance of targeting men is also meant to exploit their custodial influence in the communities, thereby facilitating rapid change to accept utilization of long-term family planning procedures.[19]

Acceptability of female sterilisation is hindered by ignorance, superstitions and low literacy among communities leading to high stigma.[9] Furthermore, the low level of permanent family planning is associated with an adverse impact on the users emanating from misconceptions, rumours, and fears.[20] Lack of adequate knowledge regarding BTL is a major contributing factor of stigmatisation against BTL, sometimes resulting in self stigmatisation. The research participants reported that women who cut or tie their reproductive system were believed to bring bad luck to themselves and could be considered as prostitutes or witches by their communities thereby invoking high stigmatisation against BTL in communities. This was based on the notion that women carry live eggs which could be fertilised and form babies, but if this is disturbed by BTL, it is the same as killing. This notion indicated that the majority of women lacked adequate knowledge regarding BTL. Adequate knowledge on BTL is very cardinal in order to address stigmatisation which is one of the contributing factors to the low accessibility of BTL as a method of long-term family planning among grand multiparous women. It is therefore important that the ministry of health work in conjunction with the maternal and reproductive health promotion service to reduce and prevent stigmatisation of permanent family planning methods like BTL through raising awareness in communities. The education and awareness on BTL should target everyone in the community, including men who normally regard themselves as custodians of their communities thereby influencing beliefs, attitudes and values held by communities.[21]

In many African communities, men have a lot of influence on all issues that are transacted in marriages, including taking decisions on family planning.[22] The research participants revealed that the cultural demands in marriages overruled women's reproductive health and anything to do with family planning is under the jurisdiction of husbands and no one else. Taking decisions independently by a woman is considered a taboo and could result in being divorced. It is therefore important that family planning professionals working in such communities are aware of these cultural power dynamics that might have a lasting impact on the uptake of irreversible family planning methods like BTL. It is therefore important that family planning educational awareness is also supported by womens' rights civic organizations to gradually change the firm grip and control of women by their husbands. To facilitate high engagement of men, it is important that civic organizations raising awareness and education on women's rights should also employ men to facilitate easy engagement with other fellow men.[23] The central government, through the ministry dealing with women s' affairs, need to educate and empower women to make decisions on issues that have a direct impact on their health and wellbeing like family planning. The empowerment of women to take control of their health needs to be supported by strong statutory instruments to enhance sustainability and protection.

In many low- and middle-income countries, fright and panic still characterise many pre-operation preparations for surgical procedures, especially where it involves making incisions or/and supplemented by other forms of invasive therapeutic methods.[24] This can also be associated with tomophobia, the general phobic or fear against medical procedures shared across communities.[25] The research participants reported fear of being anaesthetised to death because some circulating rumours in their communities were that sometimes people who are taken to operating theatres and placed under anaesthesia do not come back alive owing to safety procedures. Their anxiety totally symbolises the fears and low confidence in surgical techniques such as BTL. Others expressed worry over how they would deal with the wound from the incision because of fear of wound gapping and bleeding.

Furthermore, their perceptions were clouded with rumors that organs could be stolen and sold as part of a ritual practice, which therefore made them feel uncomfortable to ever consider BTL. There is therefore to dispel these rumours and share facts through pre-counselling sessions for surgical procedures. In addition, there is need to raise awareness and reduce the impact of rumours and misinformation through community-based health promotion initiatives enlisting the services and influence of faith and community leaders. Such an initiative can serve to quash rumours and increase the uptake of BTL. There is a relationship between self-esteem and uptake of long-term permanent family planning among many black sub-Sahara African communities. Current collated evidence in relation to this notion shows that there is low interest towards the uptake of permanent family planning methods like BTL. The research participants reported upholding their principles of womanhood and self-respect by keeping their fallopian tubes intact through refusal to the uptake of BTL. They believed it impacted on their dignity in society while destroying their self-esteem. Such an initiative should target all members in communities to change the perception that views BTL as causing loss of esteem among women.

This study has some limitations. This research was only carried out in the Copperbelt province, research encompassing all provinces in Zambia may allow comparison and subsequent generalisation of the findings. The research study utilised a qualitative approach, in future a research study utilising both qualitative and quantitative approached would allow all issues to be tackled effectively using the relevant and suitable epistemological and ontological positions.

CONCLUSION

There are pertinent challenges associated with uptake of long-term permanent family planning methods like BTL. Such challenges require a robust response and engagement of women in communities to make sure that their family planning needs are effectively addressed. More importantly, men who normally influence change in many African communities need to be engaged at the right point and opportunity to influence uptake of BTL.

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